

REMARKS

INTRODUCTION

In accordance with the following, reconsideration of the allowability of the pending claims is respectfully requested.

Claims 1-20 are pending and under consideration.

IMPROPER OFFICE ACTION

Applicants respectfully request a new Office Action with recited rejections of identified claims. The Office Action has only indicated that the outstanding rejection have been maintained and then proceeds with a description of KSR v. Teleflex and a brief description of claim 1.

However, though the Office Action indicates that the rejections of claims 1-10 have been maintained, none of claims 2-10 appear to have been addressed and no required rejection statement set forth. Claims 3 and 8 were also amended in the previous response and the Office Action has not addressed these claim features.

Thus, applicants respectfully request a new Office Action addressing each claim with particularity.

RESTRICTION RECONSIDERATION REQUEST

Briefly, again, it is noted that the outstanding Office Action again indicates that applicants elected claims without traverse since applicants did not use the exact phrase "with traverse", while then pointing out deficiencies in restriction requirement. Applicants respectfully submit that this is improper and inconsistent with the MPEP guidelines for restriction requirements.

In addition, as previously noted, the Office Action has not supported the required burdensome search to meet a prima facie restriction standard. The Office Action states that such a requirement is not necessary in species restrictions. However, MPEP 808.01(a) particularly recites "A requirement for restriction is permissible if there is a patentable difference between the species as claimed and there would be a serious burden on the examiner if restriction is not required."

Thus, contrary to the statement in the Office Action, election of species requires there to be a burden on the Examiner, and that evidence of that burden must be set forth in the record. With previous amendments to claims 11 and 18, it is further respectfully submitted that any search for

claims 1-10 will clearly encompass similar search criteria and classes/subclasses as a search for claims 11-21

REJECTION UNDER 35 USC §103

As noted above, though the outstanding Office Action does not particularly again reject claims 1-10, claims 1-10 previously stood rejected under 35 USC §103(a) as being unpatentable over De Hann et al., U.S. Patent No. 5,657,401, in view of Suzuki et al., U.S. Patent No. 6,118,552, and further in view of Wittig, U.S. Patent No. 2004/0066468, and this previous rejection will again be traversed.

The previous Office Action relied upon De Hann et al. to show a majority of the claimed features, and then relied upon Suzuki et al. to demonstrate a block average calculator and Wittig to demonstrate the claimed picture noise selector.

In response to applicant's previous remarks that the previous rejection of claim 1, for example, failed to set forth particular reasons for the proposed particular addition of a feature from Suzuki et al. and a particular feature from Wittig, the outstanding Office Action appears to merely indicate that the addition of a feature from Suzuki et al. and a feature from Wittig is obvious "to provide a more reliable method and apparatus for noise measurement...which is a simple substitution of one known element for another to obtain predictable results or is using known technique to improve similar devices (methods or products) in the same way."

However, such a recitation is improper unless supported by evidence in the record.

Contrary to the Office Action's conclusion of "substitution of one known element for another to obtain predictable results" or "using [a] known technique to improve similar devices...in the same way," the addition of features from Suzuki et al. and Wittig to the system of De Hann et al. would not be a mere substitution of like elements for predictable results and are in fact not being properly interpreted for their "known techniques".

It is respectfully submitted that the disclosure of both Suzuki et al. and Wittig have been misinterpreted and their incorporation into De Hann et al. misplaced.

De Hann et al.

As noted in the previous response, the operation of De Hann et al. is substantially identical to the background of the present application, demonstrating a calculating of a SAD of adjacent blocks of pixels and sequentially counting (through counter 5) the number of times the calculated SADs for the different blocks fall within a determined range.

Here, as each SAD is output by the SAD calculator the SAD comparator reviews the input SAD and can adjust the count within counter 5.

Further, the described SAD is of pixel differences within each divided block. Thus, in De Hann et al., a SAD of one divided block is a summation of absolute differences between pixels within that one block.

The counter 5 runs on a clock apparently corresponding to the frequency for the different blocks and is reset based upon a clock corresponding to the frequency for the entire frame, i.e., the counter 5 is reset each frame. The resultant output of the counter 5 upon reset can be used in conjunction with another counter 9 running on the clock used for resetting counter 5. The output of counter 9 is used as the value representing the noise measurement result. See De Hann et al. in col. 2, lines 33-64. The determined range used in incrementing counter 5 can also be later adjusted based upon the result of counter 9.

Thus, De Hann et al. focuses on using incremented counters to determine a noise measurement value. The incrementing of the counters is based upon whether each calculated SAD falls within a determined range.

The previous Office Action interpreted the SAD calculator of De Hann et al. as reading on the claimed "SAD calculator calculating an absolute difference between an average luminance value of a present picture and an average luminance value of a picture of the image signal delayed by the delay".

However, as noted above, the SAD calculator of De Hann et al. sums absolute differences between pixel values within each block, not absolute differences between "an average luminance value of a present picture and an average luminance value of a picture of the image signal delayed by the delay."

The SAD calculator of De Hann et al. is different from the claimed SAD calculator.

Thus, De Hann et al. cannot be interpreted as suggested in the previous Office Action. In addition, any proposed modification of De Hann et al. must take this proper interpretation of De Hann et al. into consideration. Below, applicants will briefly discuss a potential future obviousness arguments regarding Suzuki et al., which the previous Office Action used to set forth a block average calculator. Regardless, De Hann et al. cannot be interpreted as suggested in the Office Action.

Suzuki et al.

As noted above, the previous Office Action appeared to indicate that Suzuki et al. set forth the claimed "block average calculator dividing individual pictures of an input image signal into blocks and calculating average luminance values for a plurality of the divided blocks" or that with the disclosure of Suzuki et al. it would have been obvious to modify De Hann et al. to have the same.

However, any averaging of luminance values within Suzuki et al. would appear to be for the sole purpose of determining whether to categorize a block as a "blank" or background region, a monochrome region, or a color region to control a selective output of pixel values for different encoding depending on the region type determined. See Suzuki et al. in col. 6, lines 33-50, and col. 9, lines 1-49.

The use of averaged luminance values in Suzuki et al. is merely to categorize a block of pixel values as background, monochrome, or color blocks for determining which type of encoding to perform on the pixel block(s).

The use of averaged luminance values in Suzuki et al. is unrelated to the use of a SAD calculation for error estimation.

Thus, any incorporation of the teaching or disclosure of Suzuki et al. into De Hann et al. would only be for the apparent selective encoding implementation, not for changing De Hann et al. to not use the conventional SAD calculator for error estimation and now applying an SAD of averaged luminance.

Accordingly, the "averaging" of luminance values performed by Suzuki et al. cannot be selectively pasted into the system of De Hann et al. There is no need or desire for the encoding selection determination of Suzuki et al. in De Hann et al.

Still further, any expected results from such an addition of the encoding selection determination operation of Suzuki et al., if added to De Hann et al. (or modified into the same), would not be for changing the conventional SAD calculation and error estimation performed in De Hann et al. Any expected results of adding to De Hann et al. (or modifying into De Hann et al.) of the encoding selection determination operation of Suzuki et al. would only appear to be for adding a feature to De Hann et al. of selective encoding through an additional operation of averaging luminance values.

Therefore, the Office Action proposed combination of De Hann et al. and Suzuki et al. would not set forth the claimed block average calculator or the "SAD calculator calculating an absolute difference between an average luminance value of a present picture and an average luminance value of a picture of the image signal delayed by the delay."

Wittig

Lastly, the outstanding Office Action appears to argue that the last phrase of claim 1 is unclear, and that Wittig can be interpreted as reading on one of the available interpretations.

In particular, the Office Action has stated that "[t]he clause of the last claim limitation of claim 1, 'smallest value toward large value' is not clear from the claim whether it is indicating picture noise, absolute difference calculated by SAD calculator, or something else. So, Wittig's invention using counter for selecting SAD values falling within the ranger is selected can read on the claim limitation."

Here, applicants request the Examiner to particularly identify how the Examiner is interpreting the above phrase. The Office Action appears to only state that the phrase is unclear and then identify features of Wittig that could be used to read on the unclear phrase. It is respectfully submitted that any rejection of an unclear phrase must identify how that phrase is being interpreted.

Regardless, it is respectfully submitted that this phrase is not unclear.

Claim 1 particularly states:

"a picture noise selector selecting a desired number-th arranged absolute difference, of a plurality of calculations from the SAD calculator for the input image signal, as a picture noise when absolute differences calculated by the SAD calculator are arranged, in turn, from a smallest value toward a largest value." (Emphasis added).

Here, when the claimed absolute differences "calculated by the SAD calculator" are arranged "from a smallest value toward a largest value", the picture noise selector selects "a desired number-th arranged absolute difference, of a plurality of calculations from the SAD calculator for the input image signal, as a picture noise."

It is respectfully submitted that this phrasing of claim 1 is clear and definite.

Further, again, Wittig cannot be interpreted as suggested in the Office Action as "selecting a desired number-th arranged absolute difference, of a plurality of calculations from the SAD calculator for the input image signal, as a picture noise."

Wittig does not "select" a desired number-th arranged absolute difference, but rather, Wittig selects a desired number-th counter, and preferably the counter with the smallest estimated noise/error.

The selection of a number-th counter is not the same as selecting a number-th arranged absolute difference. The counters in Wittig are set based upon differing ranges. Further, the counters are merely set as different SAD values are output by the SAD calculator 10. "Thus, as described earlier, the count of counters N ... are increased by increments of 1 every time an associated comparator device determines that the current SAD value lies within the upper and lower boundary values of its programmed predetermined SAD value range."

In addition, the counters of Wittig are changed based upon input conventional SAD calculations of differences between pixels within the same picture ("[t]he difference signal determining block 10 inputs a video image signal, obtains sums of the absolute values of the differences between adjacent pixels in each video image of the video image signal, and generates a SAD signal"). Differently, the claimed calculated SAD calculation are based on "absolute differences between an average luminance value of a present picture and an average luminance value of a picture of the image signal delayed by the delay", delayed by one period. Only the present application sets forth such an arrangement and suggestion for the same.

Accordingly, it is respectfully submitted that Wittig fails to disclose the aforementioned deficient features. Further, it is further submitted the last phrase cannot be interpreted in a manner to permit an interpretation of Wittig to read upon the same.

Lastly, similar to above, it would not have been obvious to modify De Hann et al. or the combination of De Hann et al. and Suzuki et al. to set forth the claimed selection of the desired number-th arranged absolute difference or the claimed selection being related to their arrangement smallest to largest.

Any "predicted" results of changing De Hann et al. or the combination of De Hann et al. and Suzuki et al. to include such multiple counters of Wittig would not result in the claimed invention. Rather, at best, the modification of a feature or teaching from Wittig into De Hann et al. or the combination of De Hann et al. and Suzuki et al. would only permit the combination to choose the smallest error estimated from one of the available counters, not a selection of "a desired number-th arranged absolute difference, of a plurality of calculations from the SAD calculator for the input image signal, as a picture noise," as claimed, nor the arrangement of absolute differences from smallest to largest values.

CONCLUSION

Accordingly, it is respectfully submitted that the Office Action proposed combination (or any modification of the same) of De Hann et al., Suzuki et al. and Wittig would not disclose or suggest the presently claimed invention. It is respectfully submitted that it would not have been obvious to modify the cited references as suggested in the Office Action(s).

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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